General

Guideline Title

Guidelines of care for the management of atopic dermatitis. Section 3. Management and treatment with phototherapy and systemic agents.

Bibliographic Source(s)

Sidbury R, Davis DM, Cohen DE, Cordoro KM, Berger TG, Bergman JN, Chamlin SL, Cooper KD, Feldman SR, Hanifin JM, Krol A, Margolis DJ, Paller AS, Schwarzenberger K, Silverman RA, Simpson EL, Tom WL, Williams HC, Elmets CA, Block J, Harrod CG, Begolka WS, Eichenfield LF. Guidelines of care for the management of atopicÂ dermatitis. Section 3. Management and treatment with phototherapy andÂ systemicÂ agents. J Am Acad Dermatol. 2014 Aug;71(2):327-49. [74 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Hanifin JM, Cooper KD, Ho VC, Kang S, Krafchik BR, Margolis DJ, Schachner LA, Sidbury R, Whitmore SE, Sieck CK, Van Voorhees AS. Guidelines of care for atopic dermatitis. J Am Acad Dermatol. 2004 Mar;50(3):391-404. [212 references]

Recommendations

Major Recommendations

Level of evidence (I-III) and strength of recommendations (A-C) are defined at the end of the "Major Recommendations" field.

Note from the National Guideline Clearinghouse (NGC): Recommendations on atopic dermatitis (AD) treatment and management are subdivided into 4 sections given the significant breadth of the topic. This document is the third of 4 publications in the series and discusses the management of AD via phototherapy and systemic agents, including immunomodulators, antimicrobials, and antihistamines.

Recommendations for the Use of Phototherapy

- Phototherapy is a second-line treatment, after failure of first-line treatment (emollients, topical steroids, and topical calcineurin inhibitors).
- Phototherapy can be used as maintenance therapy in patients with chronic disease.
- Phototherapy treatment of all forms should be under the guidance and ongoing supervision of a physician knowledgeable in phototherapy techniques.
- The light modality chosen should be guided by factors such as availability, cost, patient skin type, skin cancer history, and patient use of photosensitizing medications.
- The dosing and scheduling of light should be based on minimal erythema dose and/or Fitzpatrick skin type.
- Home phototherapy under the direction of a physician may be considered for patients who are unable to receive phototherapy in an office setting.

Strength of Recommendations for the Management and Treatment of AD with Phototherapy and Systemic Agents

Recommendation	Strength of Recommendation	Level of Evidence	References
Phototherapy (all forms)	B	II	Morison, Parrish, & Fitzpatrick, 1978; Meduri et al., 2007; Rombold et al., 2008; Clayton et al., 2007; Jekler & Larko, 1988; Grundmann-Kollmann et al., 1999; Tay, Morelli, & Weston, 1996; Menter et al., 2010; Morison et al., 1998; Uetsu & Horio, 2003; Yoshiike et al., 1993; Atherton et al., 1988; Jury et al., 2006; Tzung et al., 2006
• Home phototherapy	C	III	Koek et al., 2009
Cyclosporine	B	I-II	Haeck et al., 2011; Schmitt et al., 2010; Hoare, Li Wan Po, & Williams, 2000; Allen, 1991; van Joost et al., 1994; Czech et al., 2000; Zurbriggen et al., 1999; Schmitt, Schmitt, & Meurer, 2007; Menter et al., 2009; Harper et al., 2000
Azathioprine (AZA)	B	II	Schram et al., 2011; Meggitt, Gray & Reynolds, 2006; Berth-Jones et al., 2002; Perrett et al., 2008; el-Azhary et al., 2009; Caufield & Tom, 2013; Evans et al., 2001; Murphy & Atherton, 2002; Hon et al., 2009
Methotrexate (MTX)	B	II	Schram et al., 2011; Menter et al., 2009; Weatherhead et al., 2007; Lyakhovitsky et al., 2010; Kalb et al., 2009; El-Khalawany et al., 2013; Dadlani & Orlow, 2005
Mycophenolate mofetil (MMF)	C	III	Haeck et al., 2011; Murray & Cohen, 2007; Heller et al., 2007
Interferon gamma (IFN-G)	B	II	Hanifin et al., 1993; Jang et al., 2000
Systemic steroids	B	II	Ring et al., 2012; Schmitt et al., 2010
Systemic antibiotics			
• None, if noninfected atopic dermatitis (AD)	B	II	Boguniewicz et al., 2001; Bath-Hextall et al., 2010; Ewing et al., 1998; Weinberg et al., 1992
• For infected AD	A	II	Boguniewicz et al., 2001; Bath-Hextall et al., 2010; Ewing et al., 1998; Weinberg et al., 1992
• Concurrent topical steroid treatment during oral antibiotic course	C	III	No clinical trials
Systemic antivirals for eczema herpeticum	C	II	Aronson et al., 2011
Against use of systemic antihistamines			
• Sedating	C	III	Diepgen, 2002; Sher et al., 2012; Klein & Clark, 1999; Hannuksela et al., 1993; Epstein & Pinski, 1964
• Nonsedating	A	II	Diepgen, 2002; Sher et al., 2012; Klein & Clark, 1999; Hannuksela et al., 1993; Epstein & Pinski, 1964

Recommendations for the Use of Systemic Immunomodulatory Agents

- Systemic immunomodulatory agents are indicated for the subset of adult and pediatric patients in whom optimized topical regimens and/or phototherapy do not adequately control the signs and symptoms of disease.
- Systemic immunomodulatory agents are indicated when the patient's skin disease has significant negative physical, emotional, or social impact.
- All immunomodulatory agents should be adjusted to the minimal effective dose once response is attained and sustained. Adjunctive therapies should be continued to use the lowest dose and duration of systemic agent possible.
- Insufficient data exist to firmly recommend optimal dosing, duration of therapy, and precise monitoring protocols for any systemic immunomodulating medication.
- Treatment decisions should be based on each individual patient's AD status (current and historical), comorbidities, and preferences.
- Cyclosporine is effective and recommended as a treatment option for patients with AD refractory to conventional topical treatment.
- Azathioprine (AZA) is recommended as a systemic agent for the treatment of refractory AD.
- Methotrexate (MTX) is recommended as a systemic agent for the treatment of refractory AD. Folate supplementation is recommended during treatment with MTX.
- Mycophenolate mofetil (MMF) may be considered as an alternative, variably effective therapy for refractory AD.
- Interferon gamma (IFN-G) is moderately and variably effective and may be considered as an alternative therapy for refractory AD in adults and children who have not responded to, or have contraindications to the use of, other systemic therapies or phototherapy.
- Systemic steroids should be avoided if possible for the treatment of AD. Their use should be exclusively reserved for acute, severe exacerbations and as a short-term bridge therapy to other systemic, steroid-sparing therapy.

Recommendations for the Use of Systemic Antimicrobials

- The use of systemic antibiotics in the treatment of noninfected AD is not recommended.
- Systemic antibiotics are appropriate and can be recommended for use in patients with clinical evidence of bacterial infections in addition to standard and appropriate treatments for AD disease itself (which may include the concurrent use of topical corticosteroids).
- Systemic antiviral agents should be used for the treatment of eczema herpeticum.

Recommendations for the use of Systemic Antihistamines

- There is insufficient evidence to recommend the general use of antihistamines as part of the treatment of AD.
- Short-term, intermittent use of sedating antihistamines may be beneficial in the setting of sleep loss secondary to itch, but should not be substituted for management of AD with topical therapies.
- Nonsedating antihistamines are not recommended as a routine treatment for AD in the absence of urticaria or other atopic conditions such as rhinoconjunctivitis.

Also refer to the dosing guidelines available in Tables IV, V, VI, and VIII in the original guideline document.

Definitions:

Level of Evidence

I. Good-quality patient-oriented evidence (i.e., evidence measuring outcomes that matter to patients: morbidity, mortality, symptom improvement, cost reduction, and quality of life).
II. Limited-quality patient-oriented evidence.
III. Other evidence, including consensus guidelines, opinion, case studies, or disease-oriented evidence (i.e., evidence measuring intermediate, physiologic, or surrogate end points that may or may not reflect improvements in patient outcomes).

Grade of Recommendation

A. Recommendation based on consistent and good-quality patient-oriented evidence.
B. Recommendation based on inconsistent or limited-quality patient-oriented evidence.
C. Recommendation based on consensus, opinion, case studies, or disease-oriented evidence.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Atopic dermatitis (AD; atopic eczema)

Note: The treatment of other forms of eczematous dermatitis is outside the scope of this document.

Guideline Category

Management

Treatment

Clinical Specialty

Allergy and Immunology

Dermatology

Family Practice

Internal Medicine

Pediatrics

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To address the management of pediatric and adult atopic dermatitis (AD; atopic eczema) of all severities

Target Population

Pediatric and adult patients with atopic dermatitis (AD; atopic eczema)

Interventions and Practices Considered

1. Phototherapy
    - Consideration of dosing and scheduling
    - Home phototherapy
2. Systemic agents
    - Cyclosporine
    - Azathioprine (AZA)
    - Methotrexate (MTX)

- Mycophenolate mofetil (MMF)
- Interferon gamma (IFN-G)
- Systemic steroids
- Systemic antibiotics (infected atopic dermatitis [AD] only)
- Systemic antihistamines (not recommended)
- Systemic antivirals (eczema herpeticum)

Major Outcomes Considered

- Disease severity
- Morbidity
- Mortality
- Symptom improvement
- Cost
- Quality of life

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

An evidence-based model was used and evidence was obtained using a search of the PubMed and the Global Resources for Eczema Trials databases from November 2003 through November 2012 for clinical questions addressed in the previous version of this guideline published in 2004, and 1960 through 2012 for all newly identified clinical questions as determined by the work group to be of importance to clinical care. Searches were prospectively limited to publications in the English language. Medical Subject Headings terms used in various combinations in the literature search included: "atopic dermatitis," "atopic eczema," "systemic agent(s)," "immunomodulatory," "immunosuppressive," "cyclosporine," "azathioprine," "mycophenolate mofetil," "methotrexate," "interferon gamma," "prednisone," "prednisolone," "biologics," "TNF-alpha inhibitor," "etanercept," "infliximab," "leukotriene inhibitor," "omalizumab," "oral tacrolimus," "oral pimecrolimus," "ascomycin," "thymopentin/TP-5," "intravenous immunoglobulin," "theophylline," "papaverine," "phototherapy," "photochemotherapy," "ultraviolet," "laser," "systemic/oral antimicrobial," "systemic/oral antibiotic," "antihistamines," "cetirizine," "fexofenadine," "loratadine," "terfenadine," "olopatadine," "clemastine,""leukotriene," "zafirlukast," and "montelukast."

A total of 1063 abstracts were initially assessed for possible inclusion. After removal of duplicate data, 185 were retained for final review based on relevancy and the highest level of available evidence for the outlined clinical questions.

The American Academy of Dermatology's (AAD's) prior published guidelines on atopic dermatitis (AD) were evaluated, as were other current published guidelines on atopic dermatitis.

Number of Source Documents

185 publications were retained for final review

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Evidence was graded using a 3-point scale based on the quality of study methodology as follows:

I. Good-quality patient-oriented evidence (i.e., evidence measuring outcomes that matter to patients: morbidity, mortality, symptom improvement, cost reduction, and quality of life).
II. Limited-quality patient-oriented evidence.
III. Other evidence, including consensus guidelines, opinion, case studies, or disease-oriented evidence (i.e., evidence measuring intermediate, physiologic, or surrogate end points that may or may not reflect improvements in patient outcomes).

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Evidence tables were generated for these studies and used by the work group in developing recommendations.

The available evidence was evaluated using a unified system called the Strength of Recommendation Taxonomy (SORT) developed by editors of the US family medicine and primary care journals (i.e., *American Family Physician, Family Medicine, Journal of Family Practice*, and *BMJ USA*). Evidence was graded using a 3-point scale based on the quality of study methodology (e.g., randomized control trial [RCT], case-control, prospective/retrospective cohort, case series), and the overall focus of the study (i.e., diagnosis, treatment/prevention/screening, or prognosis). (See the "Rating Scheme for the Strength of the Evidence" field.)

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

A work group of recognized atopic dermatitis (AD) experts was convened to determine the audience and scope of the guideline, and to identify important clinical questions in the use of topical therapies for AD management.

Clinical questions used to structure the evidence review for the treatment of AD with phototherapy and systemic agents:

- Which immunomodulatory agents are efficacious and safe for the treatment of AD?
  - Cyclosporin A (CSA)
  - Azathioprine (AZA)
  - Mycophenolate mofetil (MMF)
  - Methotrexate (MTX)
  - Interferon gamma (IFN-G)
  - Systemic steroids
  - Tumor necrosis factor-alpha inhibitors (etanercept, infliximab)
  - Leukotriene inhibitors
  - Omalizumab
  - Oral calcineurin inhibitors
  - Other (e.g., thymopentin [TP]/TP-5, intravenous immunoglobulin, theophylline, papaverine)
- What is the efficacy of systemic antimicrobials and systemic antihistamines for the treatment of AD?
- What is the optimal dose, frequency of use, adverse effects, and efficacy of phototherapy and photochemotherapy for the treatment of AD?

Clinical recommendations were developed based on the best available evidence tabled in the guideline. In those situations where documented evidence-based data were not available, expert opinion was used to generate clinical recommendations.

Rating Scheme for the Strength of the Recommendations

Clinical recommendations were developed based on the best available evidence. These are ranked as follows:

A. Recommendation based on consistent and good-quality patient-oriented evidence.
B. Recommendation based on inconsistent or limited-quality patient-oriented evidence.
C. Recommendation based on consensus, opinion, case studies, or disease-oriented evidence.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This guideline has been developed in accordance with the American Academy of Dermatology (AAD)/AAD Association *Administrative Regulations for Evidence-based Clinical Practice Guidelines* (version approved May 2010), which includes the opportunity for review and comment by the entire AAD membership and final review and approval by the AAD Board of Directors.

Evidence Supporting the Recommendations

References Supporting the Recommendations

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Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate management and treatment of patients with atopic dermatitis (AD)

Potential Harms

- Different forms of phototherapy have distinct risk profiles that the clinician must take into account. Several common adverse effects include: actinic damage, local erythema and tenderness, pruritus, burning, and stinging. Less common consequences of light therapy include: nonmelanoma skin cancer, melanoma (particularly with the use of psoralen plus ultraviolet A [PUVA]), lentigines, photosensitive eruptions (especially polymorphous light eruption), folliculitis, photo-onycholysis, herpes simplex virus (HSV) reactivation, and facial hypertrichosis. Cataract formation is a recognized side effect specific to ultraviolet A (UVA) therapy, whereas the addition of oral psoralen to UVA treatment frequently causes patients to have headaches, nausea, and vomiting, and rarely hepatotoxicity. Oral psoralen also increases a patient's photosensitivity, both cutaneous and ocular, for several hours after ingestion.
- Systemic immunomodulatory agents
  - Potential adverse effects of cyclosporin A (CSA) include: infection, nephrotoxicity, hypertension, tremor, hypertrichosis, headache, gingival hyperplasia, and increased risk of skin cancer and lymphoma. Thus, patients receiving CSA should be monitored for such potential consequences. These adverse effects may occur regardless of daily dosage used, but high-dose groups and low-dose groups have only been compared and measured over short periods of time (up to 12 weeks). Some studies showed higher serum creatinine levels in patients given higher doses initially, but this trended downward over time to match the low-dose counterparts. Caution is advised when using CSA in patients on other systemic medications because of drug interactions.
  - Nausea, vomiting and other gastrointestinal (GI) symptoms (bloating, anorexia, cramping) are common while on azathioprine (AZA), and may cause patient dissatisfaction and noncompliance. Other side effects that have been variably reported include: headache, hypersensitivity reactions, elevated liver enzymes, and leukopenia. These potential side effects must be taken into consideration in individual patients, with a thorough history, physical examination, and laboratory monitoring performed as deemed appropriate before and during therapy. Although an increased risk of infection, lymphoma, and nonmelanoma skin cancer development has been noted on some patients treated with AZA for other conditions, these patient populations usually require polypharmacy for their disorders, confounding the true relevance to AZA use.
  - Nausea and other GI symptoms may preclude oral administration of methotrexate (MTX). Severe adverse effects, including bone-marrow suppression and pulmonary fibrosis, can occur. Literature suggests bone-marrow suppression is often reversible upon MTX dose reduction or discontinuation. Risk for skin cancer and lymphoma has been reported, although some cases of lymphoma arising during low-dose treatment have regressed on drug discontinuation. Pulmonary fibrosis may occur with short- or long-term use of the medication, such that patients with pulmonary diseases (e.g., asthma, chronic cough) may not be candidates. The side-effect profile for children on MTX commonly includes GI symptoms such as stomatitis, nausea, and vomiting, but the same potential risks exist in children as they do in adults.
  - Mycophenolate mofetil (MMF) is generally well tolerated, with nausea, vomiting, and abdominal cramping being the most common side effects. These GI symptoms may improve if the patient takes the enteric-coated formulation. The development of GI symptoms, along with headaches and fatigue, are not dose dependent and do not tend to negatively impact compliance. Rarely, hematologic (anemia, leukopenia, thrombocytopenia) and genitourinary (urgency, frequency, dysuria) symptoms have been reported. There is a theoretical risk of increased susceptibility to viral and bacterial infections while taking MMF, as is clearly observed in patients with organ transplantation. Similar to other immunosuppressive drugs, cutaneous malignancy and lymphoma are potential risks, although

difficult to delineate for MMF given many reports involve multidrug therapy.
    - See Table IX in the original guideline document for a summary of the potential adverse effects, interactions, and contraindications of selected systemic immunomodulatory agents. See also the "Adverse Effects and Monitoring" sections in the original guideline document for additional information.
- Constitutional side effects (fatigue, fever, nausea, vomiting, myalgia) have been documented with the use of interferon gamma (IFN-G).
- Adverse effects of systemic steroids include: hypertension, glucose intolerance, gastritis, weight gain, decreased bone density, adrenal suppression, and emotional lability. Pediatric patients experience decreased linear growth while on the medication. All potential adverse effects of systemic steroids in adults may also be observed in children.

Contraindications

Contraindications

Table IX in the original guideline document summarizes the contraindications of selected systemic immunomodulatory agents.

Qualifying Statements

Qualifying Statements

Adherence to these guidelines will not ensure successful treatment in every situation. Furthermore, these guidelines should not be interpreted as setting a standard of care, or be deemed inclusive of all proper methods of care nor exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific therapy must be made by the physician and the patient in light of all the circumstances presented by the individual patient, and the known variability and biological behavior of the disease. This guideline reflects the best available data at the time the guideline was prepared. The results of future studies may require revisions to the recommendations in this guideline to reflect new data.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Sidbury R, Davis DM, Cohen DE, Cordoro KM, Berger TG, Bergman JN, Chamlin SL, Cooper KD, Feldman SR, Hanifin JM, Krol A, Margolis DJ, Paller AS, Schwarzenberger K, Silverman RA, Simpson EL, Tom WL, Williams HC, Elmets CA, Block J, Harrod CG, Begolka WS, Eichenfield LF. Guidelines of care for the management of atopicÂ dermatitis. Section 3. Management and treatment with phototherapy andÂ systemicÂ agents. J Am Acad Dermatol. 2014 Aug;71(2):327-49. [74 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

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Guideline Developer(s)

American Academy of Dermatology - Medical Specialty Society

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Guideline Committee

Atopic Dermatitis Work Group

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Financial Disclosures/Conflicts of Interest

The American Academy of Dermatology (AAD) strives to produce clinical guidelines that reflect the best available evidence supplemented with the judgment of expert clinicians. Significant efforts are taken to minimize the potential for conflicts of interest to influence guideline content. Funding of guideline production by medical or pharmaceutical entities is prohibited, full disclosure is obtained and evaluated for all guideline contributors, and

recusal is used to manage identified relationships. The AAD conflict of interest policy summary may be viewed at www.aad.org .

Work group members completed a disclosure of interests that was updated and reviewed for potential relevant conflicts of interest throughout guideline development. If a potential conflict was noted, the work group member recused himself or herself from discussion and drafting of recommendations pertinent to the topic area of the disclosed interest.

The below information represents the authors identified relationships with industry that are relevant to the guideline. Relevant relationships requiring recusal for the drafting of guideline recommendations are noted. The management of conflict of interest for this guideline complies with the Council of Medical Specialty Societies' Code of Interactions with Companies.

Dr Cohen served on the advisory boards and as a consultant for Ferndale Labs, Galderma, and Onset receiving honoraria; served on the board of directors and as a consultant for Brickell Biotechnology and Topica receiving honoraria, stock, and stock options; and was a consultant for Dermira and Dr Tattoff receiving honoraria and stock options.

Dr Bergman served as a consultant for Pediapharm receiving honoraria.

Dr Chamlin served on the advisory boards for Galderma, Promius, and Valeant receiving honoraria.

Dr Cooper served on the Board of Directors for the American Academy of Dermatology receiving no compensation.

Dr Feldman served on the advisory boards for Amgen, Doak, Galderma, Pfizer, Pharmaderm, Skin Medica, and Stiefel receiving honoraria; was a consultant for Abbott, Astellas, Caremark, Coria, Gerson Lehrman, Kikaku, Leo Pharma, Medicis, Merck, Merz, Novan, Peplin, and Pfizer receiving honoraria, and Celgene, HanAll, and Novartis receiving other financial benefits; was a speaker for Abbott, Amgen, Astellas, Centocor, Dermatology Foundation, Galderma, Leo Pharma, Novartis, Pharmaderm, Sanofi-Aventis, Stiefel, and Taro receiving honoraria; served as a stockholder and founder for Causa Technologies and Medical Quality Enhancement Corporation receiving stock; served as an investigator for Abbott, Amgen, Anacor, Astellas, Basilea, Celgene, Centocor, Galderma, Medicis, Skin Medica, and Stiefel receiving grants, and Suncare Research receiving honoraria; and had other relationships with Informa, UptoDate, and Xlibris receiving royalty, and Medscape receiving honoraria. Dr Feldman recused himself for the drafting of guideline recommendations related to phototherapy.

Dr Hanifin served on the advisory board for Chugai Pharma USA receiving honoraria; was a consultant for GlaxoSmithKline, Merck Elocon Advisory Board, Pfizer, and Valeant Elidel Advisory Board receiving honoraria; and served as an investigator for Asubio, Dohme, and Merck Sharp receiving grants.

Dr Krol served as an investigator for Pierre-Fabre receiving grants.

Dr Margolis served as a principal investigator for a Valeant postmarketing study. All sponsored research income was paid directly to his employer.

Dr Paller served as a consultant to Anacor, Galderma, Leo Pharma, Promius, Sanofi/Regeneron, and TopMD receiving honoraria; and was an investigator for Astellas, Galderma, Leo Pharma, and TopMD receiving no compensation.

Dr Silverman served as a speaker for Galderma and Promius receiving honoraria.

Dr Simpson served as a consultant for Asubio, Brickell Biotech, Galderma, Medicis, Panmira Pharmaceuticals, and Regeneron, and a speaker for Centocor and Galderma receiving honoraria; and was an investigator for Amgen, Celgene, Galderma, and Regeneron receiving other financial benefits.

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Drs Sidbury, Davis, Cordoro, Berger, Schwarzenberger, and Williams, Ms Block, Mr Harrod, and Ms Smith Begolka have no conflicts of interest to declare.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Hanifin JM, Cooper KD, Ho VC, Kang S, Krafchik BR, Margolis DJ, Schachner LA, Sidbury R, Whitmore SE, Sieck CK, Van Voorhees AS. Guidelines of care for atopic dermatitis. J Am Acad Dermatol. 2004 Mar;50(3):391-404. [212 references]

Guideline Availability

Electronic copies: Available from the American Academy of Dermatology Association Web site .

Print copies: Available from the AAD, PO Box 4014, Schaumburg, IL 60168-4014, Phone: (847) 330-0230 ext. 333; Fax: (847) 330-1120; Web site: www.aad.org .

Availability of Companion Documents

The following is available:

- American Academy of Dermatology (AAD) guideline development process, Schaumburg (IL): American Academy of Dermatology (AAD). Electronic copies: Available from the American Academy of Dermatology Web site .

Patient Resources

The following is available:

- Atopic dermatitis. For the public. Schaumburg (IL): American Academy of Dermatology (AAD). Available from the American Academy of Dermatology (AAD) Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI on April 19, 2004. The information was verified by the guideline developer on May 19, 2004. This summary was updated by ECRI on March 15, 2005 following release of a public health advisory from the U.S. Food and Drug Administration regarding the use of Elidel. This summary was updated by ECRI on January 31, 2006, following release of a public health advisory from the U.S. Food and Drug Administration regarding the use of Elidel Cream (pimecrolimus) and Protopic Ointment (tacrolimus). This summary was updated by ECRI Institute on November 6, 2007, following the U.S. Food and Drug Administration advisory on CellCept (mycophenolate mofetil). This summary was updated by ECRI Institute on July 8, 2008, following the updated U.S. Food and Drug Administration (FDA) advisory on CellCept (mycophenolate mofetil) and Myfortic (mycophenolate acid). This summary was updated by ECRI Institute on February 19, 2009, following the U.S. Food and Drug Administration (FDA) advisory on CellCept (mycophenolate mofetil). This summary was updated by ECRI Institute on March 26, 2009, following the updated FDA advisory on CellCept and Myfortic. This summary was updated by ECRI Institute on August 18, 2009, following the revised FDA advisory on CellCept (mycophenolate mofetil). This summary was updated by ECRI Institute on August 24, 2009, following the revised FDA advisory on CellCept (mycophenolate mofetil). This summary was updated by ECRI Institute on September 11, 2009, following the revised FDA advisory on Myfortic (mycophenolic acid). This summary was updated by ECRI Institute on September 17, 2014. The updated information was verified by the guideline developer on October 15, 2014.

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